

What is claimed is:

1. A process for removing an aqueous slurry suspension, comprising a blast medium and coating substance residues, produced when cleaning surfaces having a corrosion protection coating on the surfaces which comprises:
 - a) suctioning the aqueous slurry suspension comprising a blast medium and coating substance residues into a receiving tank by an air feed;
 - b) diluting the suspension with water under vacuum in the receiving tank;
 - c) feeding the diluted suspension by means of a pump into a settling tank,
 - c) separating a solids materials portion of the suspension from the water by sedimentation, and
 - e) recycling the separated water,wherein the suctioning of the aqueous slurry suspension into the receiving tank is conducted with a vacuum, wherein a pressure ratio of outside pressure to receiving tank pressure is 1:0.52 or more, whereby the aqueous suspension is diluted to a solid materials proportion of a maximum of about 10% by volume, and wherein the diluted suspension is fed continuously to the settling tank and overcomes a height differential of at least about 5 meters.
2. The process according to claim 1 in which the pump utilized in step c) is a centrifugal pump or diaphragm pump.
3. Process according to claim 1 in which the suspension in step b) is diluted with water to a solid materials proportion of about 5% by volume.
4. The process according to claim 2 in which the suspension in step b) is diluted with water to a solid materials proportion of about 5% by volume.

5. The process according to claim 1 in which the continuous feeding in step c) overcomes a height differential of about 30 meters or more.
- 5 6. The process according to claims 2 in which the continuous feeding in step c) overcomes a height differential of about 30 meters or more.
7. The process according to claims 3 in which the continuous feeding in step c) overcomes a height differential of about 30 meters or more.
- 10 8. The process according to claim 1 in which the pumping of step c) is accomplished in a multistage manner.
9. The process according to claim 2 in which the pumping of step c) is
- 15 accomplished in a multistage manner.
10. The process according to claim 3 in which the pumping of step c) is accomplished in a multistage manner.
- 20 11. The process according to claim 4 in which the pumping of step c) is accomplished in a multistage manner.
12. The process according to claim 5 in which the pumping of step c) is accomplished in a multistage manner.
- 25 13. The process according to claim 6 in which the pumping of step c) is accomplished in a multistage manner.

14. The process according to claim 7 in which the pumping of step c) is accomplished in a multistage manner.

5 15. Process according to claim 1 in which the suspension in step b) is diluted with water to a solid materials proportion of from about 3% to about 10 % by volume.

16. Process according to claim 1 in which the receiving tank has a vacuum of at least 0.5 bar with respect to atmospheric pressure.

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17. Process according to claim 1 in which the suspension in step a) prior to dilution has a solid materials proportion of from about 10% to about 40 % by volume.

15 18. A process for removing an aqueous slurry suspension, comprising a blast medium and coating substance residues, produced when cleaning surfaces having a corrosion protection coating on the surfaces which comprises:

- 20 a) suctioning the aqueous slurry suspension comprising a blast medium and coating substance residues into a receiving tank by an air feed, with a diaphragm pump of about 6 bar and a hose of about 40 meters;
- b) diluting the suspension with water under vacuum in the receiving tank;
- c) feeding the diluted suspension by means of a pump into a settling tank,
- c) separating a solids materials portion of the suspension from the water by sedimentation, and
- 25 e) recycling the separated water,

wherein the suctioning of the aqueous slurry suspension into the receiving tank is conducted with a vacuum, wherein a pressure ratio of outside pressure to receiving tank pressure is 1:0.52 or more, whereby the aqueous suspension is

diluted to a solid materials proportion of a maximum of about 10% by volume, and wherein the diluted suspension is fed continuously to the settling tank overcomes a height differential of about 30 meters.

- 5 19. An apparatus for removing an aqueous slurry suspension, comprising a blast medium and coating substance residues, produced when cleaning surfaces having a corrosion protection coating on the surfaces which comprises:
- 10 a) a device for suctioning the aqueous slurry suspension comprising a blast medium and coating substance residues into a receiving tank by an air feed;
- b) a device for diluting the suspension with water;
- c) a device for feeding the diluted suspension by means of a pump into a settling tank,
- 15 c) a device for separating a solids materials portion of the suspension from the water by sedimentation, and
- e) a device for recycling the separated water,
- wherein the device for suctioning of the aqueous slurry suspension into the receiving tank is comprises a vacuum generator which generates a pressure ratio of outside pressure to receiving tank pressure of 1:0.52 or
- 20 more, and wherein the aqueous suspension is diluted to a solid materials proportion of a maximum of about 10% by volume, and wherein the diluted suspension is capable of being fed continuously to the settling tank and capable of overcoming a height differential of at least about 5 meters.
- 25 20. The apparatus according to claim 19 wherein the pump is a centrifugal pump or diaphragm pump.

21. The apparatus according to claim 19 wherein the pump comprises a plurality of pumping stages.